



Household Energy Consumption and Expenditures 1993

Preliminary Estimates

The preliminary estimates of household energy consumption and expenditures in this Energy Preview are taken from the 1993 Residential Energy Consumption Survey (RECS), a national multistage probability sample survey that the Energy Information Administration (EIA) conducts every 3 years. The RECS gathers data primarily by means of personal interviews with householders and a mail survey of those households' energy suppliers. The 1993 RECS sample included more than 7 thousand households and increased the subsample of new homes by a factor of nearly three over the 1990 RECS subsample to better assess changes in consumption behavior and the effects of climate, energy conservation efforts, and energy prices on residential energy consumption.

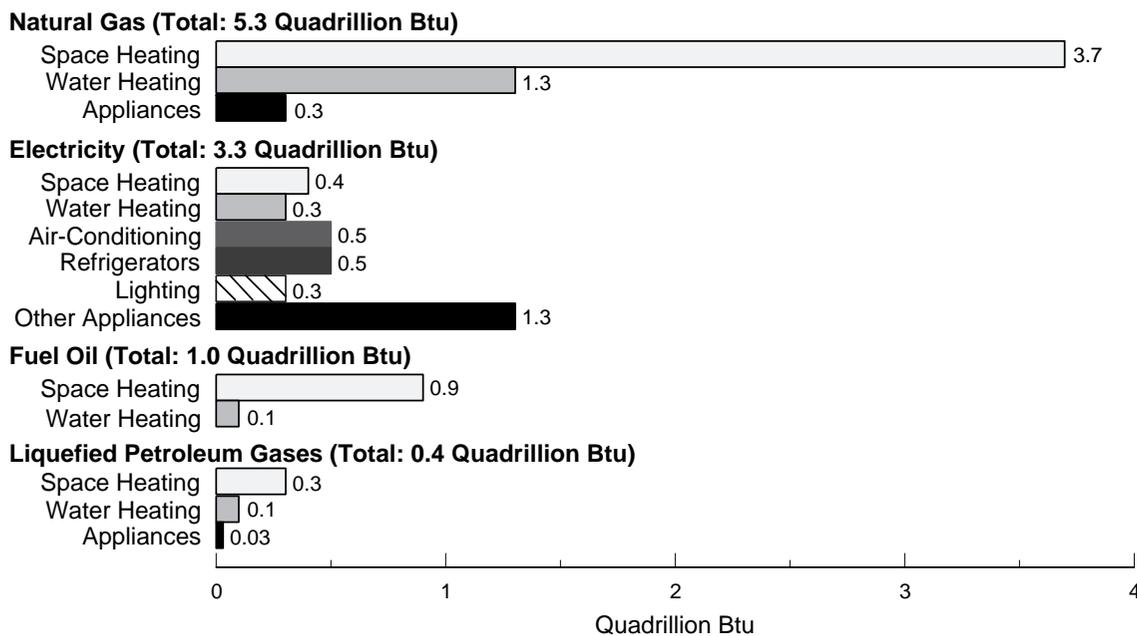
The scope of the 1993 RECS was further broadened to encompass a number of new items, reflecting EIA's efforts to better understand the factors that affect the amount of energy consumed for various end uses (Figure 1). The expanded survey included an entire sequence of questions concerning indoor light usage. The survey also sought to collect more data concerning hot water usage by asking respondents about their use of washing machines and dishwashers, as well as about the number of showers or baths

taken each week. EIA now has first-time estimates of electricity used for lighting (940 kilowatthours per year), electric clothes dryers (875 kilowatthours per year), electric ranges and ovens (458 kilowatthours per year), and dishwashers (299 kilowatthours per year).

Average total energy consumption per household was 103.6 million Btu in 1993 (Table 1), compared with 98.1 million Btu in 1990. The increase reflects primarily greater energy use for space heating during the winter (which was colder than that of 1990) and for appliances, but other uses contributed as well.

A companion report published in June 1995, *Housing Characteristics 1993*, contains information on the physical characteristics of the housing units, appliances used, occupants, types of fuels, and other characteristics related to energy use. Preliminary consumption and expenditure tables are available now from the National Energy Information Center (telephone: 202-586-8800; fax: 202-586-0727; Internet E-mail: infoctr@eia.doe.gov). Final data will be published in EIA's *Household Energy Consumption and Expenditures 1993*, planned for September 1995.

Figure 1. Household End Uses of Major Energy Sources, 1993
(Quadrillion Btu)



Note: A fifth major energy source, kerosene, accounts for 0.05 quadrillion Btu of end-use consumption; 0.001 quadrillion Btu of that total is used for water heating, the rest for space heating.

Source: Energy Information Administration, Forms EIA-457A through H, 1993 Residential Energy Consumption Survey.

Table 1. Household Energy Consumption and Expenditures, Preliminary Estimates, 1993

Housing Characteristic	Number of Households (millions)	Total Consumption (quadrillion Btu)	Total Expenditures (billion dollars)	Average Consumption per Household (million Btu)	Average Expenditure per Household (dollars)
Use of Major Fuel(s)	96.6	10.01	123.91	103.6	1,282
Electricity	96.6	3.28	81.08	34.0	840
Site	—	3.28	—	—	—
Primary	—	9.91	—	—	—
Natural Gas	58.7	5.27	32.04	89.9	546
Fuel Oil	10.8	1.02	6.61	94.7	612
Liquefied Petroleum Gas ..	8.1	0.38	3.81	46.8	470
Kerosene	3.6	0.05	0.37	12.8	103
Climate Zone					
Less than 2,000 CDD ^a and More than 7,000 HDD ^a ..	8.7	1.08	10.90	124.0	1,254
5,500 to 7,000 HDD	26.5	3.42	35.93	129.2	1,356
4,000 to 5,499 HDD	22.5	2.43	30.51	108.3	1,359
Less than 4,000 HDD	17.8	1.40	19.70	78.5	1,107
2,000 CDD or more and Less than 4,000 HDD ..	21.2	1.68	26.87	79.0	1,267
Year of Construction					
1939 or before	20.4	2.63	26.97	129.4	1,325
1940 to 1949	6.9	0.77	8.56	111.8	1,240
1950 to 1959	13.1	1.49	18.12	114.1	1,387
1960 to 1969	15.0	1.55	18.89	102.9	1,257
1970 to 1979	18.1	1.59	22.18	87.9	1,222
1980 to 1984	8.5	0.68	10.55	80.3	1,247
1985 to 1987	5.5	0.47	7.05	85.2	1,284
1988 to 1990	4.7	0.43	6.23	90.4	1,322
1991 to 1993 ^b	4.5	0.40	5.36	88.9	1,200
Heated Floorspace (square feet)					
Fewer than 1,000	29.3	1.96	25.65	66.7	875
1,000 to 1,999	40.2	4.05	51.68	100.7	1,286
2,000 to 2,999	17.8	2.44	28.93	136.6	1,622
3,000 or more	9.3	1.57	17.66	168.8	1,901
Census Region and Division					
Northeast	19.5	2.38	29.72	122.4	1,526
New England	5.1	0.62	7.77	123.1	1,532
Middle Atlantic	14.4	1.76	21.95	122.1	1,523
Midwest	23.3	3.13	31.12	134.3	1,336
East North Central	16.4	2.27	22.21	138.8	1,358
West North Central	6.9	0.86	8.91	123.8	1,282
South	33.5	2.95	43.67	87.9	1,304
South Atlantic	17.4	1.35	22.37	77.8	1,288
East South Central	6.0	0.57	7.20	94.9	1,200
West South Central	10.1	1.02	14.09	101.1	1,391
West	20.4	1.55	19.41	76.0	953
Mountain	5.4	0.53	5.49	98.1	1,025
Pacific	15.0	1.02	13.91	68.2	928
Most Populous States					
California	11.1	0.73	10.50	65.2	944
Florida	5.6	0.29	6.58	52.1	1,180
New York	6.8	0.82	10.73	121.2	1,577
Texas	6.4	0.61	8.70	94.7	1,349

^aCDD=Cooling Degree-Days. HDD=Heating Degree-Days. CDD and HDD are, respectively, measures of how hot and cold a location is over a period, compared with a base temperature (here, 65° F). Climate zones are defined by long-term weather conditions that affect heating and cooling loads in buildings. High HDD values imply generally colder areas, while high CDD

values imply generally warmer areas.

^b1993 data do not include all new construction for the year.

— = Not applicable.

Source: Energy Information Administration, Forms EIA-457A through H, 1993 Residential Energy Consumption Survey.

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